

$$D_{\psi}(\boldsymbol{w}||\boldsymbol{u}) = \psi(\boldsymbol{w}) - \psi(\boldsymbol{u}) - \nabla\psi(\boldsymbol{u})^{\top}(\boldsymbol{w} - \boldsymbol{u})$$

$$\psi(\boldsymbol{w}) - \psi(\boldsymbol{u}) = \nabla\psi(\boldsymbol{u})^{\top}(\boldsymbol{w} - \boldsymbol{u}) + D_{\psi}(\boldsymbol{w}||\boldsymbol{u})$$

Difference of function values

First order approximation of $\psi(\boldsymbol{w})$

Bregman Divergence
(approximation error)

